

ABSTRACT OF THE DISCLOSURE

A method and a device for measuring in real time the thickness of an integrated circuit layer with the layer to be measured being deposited on an underlying layer. During an engraving operation, the advance of the engraving front generated during the engraving operation is monitored by plotting the optical emission spectrum of the product of the engraving reaction in real time on a spectral component of the underlying layer. A time distribution of the optical emission amplitude of the engraving reaction product is established and the transition of the optical emission amplitude on the distribution as the engraving front passes from the layer to be measured to the underlying layer as established. The thickness of the layer to be measured is thus computed on the basis of the distribution and the transition by a correlation with the transition on the distribution.